

# Hysteroscopy Findings in Postmenopausal Women: Does Being Symptomatic Matters?

## Postmenopozal Kadınlarda Histeroskopi Bulguları: Semptomatik Olmak Önemli mi?

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### ABSTRACT

**Objective:** Management of incidentally diagnosed thick endometrium in asymptomatic postmenopausal women is controversial. Current study aims to evaluate the hysteroscopy and histopathological findings in postmenopausal women who have either postmenopausal bleeding or incidentally found thickened endometrium. **Material and Methods:** The retrospective study was conducted in the Gynecology Department of an University Hospital covering medical records of women between 2012 and 2018. Totally the records of 65 postmenopausal women, all of whom were evaluated with hysteroscopy, either with postmenopausal bleeding (Group A, n=30) or incidentally found thickened endometrium (Group B, n=35) were included. All patients were evaluated with transvaginal ultrasound and hysteroscopy. Intraoperative and postoperative findings were recorded and evaluated for two groups. **Results:** In Group A, histopathological evaluation revealed endometrial hyperplasia without atypia in one patient (1/30, 3%) and endometrioid adenocarcinoma in one patient (1/30, 3%). In Group B, one case (1/35, 3%) was reported to have endometrial hyperplasia without atypia, one case had endometrial hyperplasia with atypia (1/35, 3%) and one woman endometrioid adenocarcinoma (1/35, 3%). Accuracy of hysteroscopic findings were 70% (21/30) in Group A and 91% (32/35) in Group B. **Conclusion:** As an incidental finding, thick endometrium seems to be as important as postmenopausal bleeding, as the results of this study shows similar outcomes in terms of premalignant lesions and endometrial cancer in both groups. Even in the absence of risk factors further evaluation and endometrial sampling should be considered for postmenopausal women with incidentally diagnosed thick endometrium.

**Keywords:** Endometrial thickness; postmenopausal bleeding; menopause; hysteroscopy

### ÖZET

**Amaç:** Asemptomatik postmenopozal kadınlarda insidental olarak saptanan kalın endometriyumun yönetimi tartışmalıdır. Bu çalışmanın amacı postmenopozal kanaması veya insidental olarak saptanmış kalın endometriyum olan postmenopozal kadınlarda, histeroskopi ve histopatoloji bulgularını değerlendirmektir. **Gereç ve Yöntemler:** Bu çalışma bir Üniversite Hastanesinin Jinekoloji Bölümünde, 2012 ve 2018 arasındaki hasta kayıtlarının retrospektif olarak taranmasıyla yapılmıştır. Toplamda tümü histeroskopi ile değerlendirilmiş; postmenopozal kanaması olan (Grup A, n=30) veya insidental olarak saptanan kalın endometriyum olan (Grup B, n=35), 65 postmenopozal hasta çalışmaya dahil edilmiştir. Tüm hastalar transvajinal ultrason ile değerlendirilmiş ve tüm hastalara sedasyon altında vajinoskopik yaklaşımla diagnostik histeroskopi yapılmıştır. İntraoperatif ve postoperatif bulgular kaydedilmiş ve 2 gruba ait bulgular değerlendirilmiştir. **Bulgular:** Dahil edilen vakaların ortalama yaşı 57.9±7.91'dir. A grubunda histopatolojik değerlendirme; 28 hastada benign patolojileri gösterirken, 1 hastada atipisiz endometrial hiperplazi (1/30, %3), 1 hastada (1/30, %3) ise endometrioid tipte adenokarsinoma olarak raporlanmıştır. B grubunda histopatolojik değerlendirme; 32 hastada benign patolojileri gösterirken, 1 hastada atipisiz endometrial hiperplazi (1/35, %3), 1 hastada (1/35, %3) atipili endometrial hiperplazi, 1 hastada (1/35, %3) ise endometrioid tipte adenokarsinoma olarak raporlanmıştır. Histeroskopi bulgularının doğruluğu A grubunda %70 (21/30), B grubunda %91 (32/35) olarak saptanmıştır. **Sonuç:** Çalışma sonuçlarının premalign ve malign lezyonlar anlamında 2 grup arasında benzer olmasından anlaşılacağı üzere postmenopozal kadınlarda insidental olarak saptanan kalın endometriyum postmenopozal kanama kadar önemlidir. Risk faktörlerinin yokluğunda dahi insidental olarak saptanan kalın endometriyum olan postmenopozal kadınlarda endometrial örnekleme ve ileri değerlendirme yapılmalıdır.

**Anahtar Kelimeler:** Endometrial kalınlık; postmenopozal kanama; menopoz; histeroskopi

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Endometrial cancer is the most common gynecological cancer and postmenopausal bleeding is the leading symptom in 90% of the cases.<sup>1-3</sup> However %20 of women diagnosed with endometrial cancer are asymptomatic.<sup>4</sup> Although postmenopausal bleeding (PMB) is a common symptom in patients who present at outpatient clinic, it indicates endometrial cancer in 10% of women.<sup>5,6</sup>

In spite of the fact that most frequent causes of postmenopausal bleeding are benign, including endometrial atrophy, polyps or endometrial hyperplasia; in the presence of postmenopausal bleeding, exclusion of endometrial cancer and endometrial intraepithelial neoplasia is essential.<sup>7</sup> Endometrial sampling and transvaginal ultrasound (TV-US) are alternative diagnostic procedures in such cases.<sup>8,9</sup> Evaluation of endometrial thickness by TV-US has been widely used as an accurate and non-invasive method and an endometrial thickness of 4 mm or less has a greater than 99% negative predictive value for endometrial cancer in women with postmenopausal bleeding. On the other hand, unless there is a thin and well demarcated endometrial echo; sonohysterography, office hysteroscopy or endometrial sampling should be offered in order to exclude premalignant/malignant lesions. Among all, hysteroscopy is accepted as the best tool for optimal assessment of endometrial pathologies.<sup>8,10</sup>

Incidental finding of a thickened endometrium is common among postmenopausal women.<sup>11</sup> However, American College of Obstetricians and Gynecologists (ACOG) does not recommend routine evaluation of the endometrium histopathologically when thick endometrium is an incidental finding. Instead, an individualized assessment based on patient characteristics and risk factors is preferred.<sup>8</sup> European Menopause and Andropause Society (EMAS) also suggests individualized assessment for these women.<sup>9</sup> Yet management of asymptomatic postmenopausal women with thickened endometrium still needs to be established.

The current study aims to evaluate the hysteroscopy and histopathological findings in postmenopausal women who have postmenopausal bleeding and women who are found to have thick en-

dometrium in their routine postmenopausal gynecological examination incidentally. Secondly, visual accuracy of hysteroscopy findings was also evaluated.

## MATERIAL AND METHODS

The retrospective study was conducted in the Gynecology Department of a University Hospital covering medical records of women between 2012 and 2018. Medical records of postmenopausal women who were evaluated with hysteroscopy either due to postmenopausal bleeding (n=30) (Group A) or thick endometrium (n=35) (Group B) were included in the analysis. Group A consisted of symptomatic patients who were determined to undergo hysteroscopy due to postmenopausal bleeding. Group B consisted of asymptomatic patients who were determined to undergo hysteroscopy because of sonographically defined, thickened endometrium.

TV-US was performed as the initial diagnostic tool in all patients. Endometrial thickness was measured from a longitudinal plane through thickest area of the endometrium. Thick endometrium was defined according to ACOG's suggested cut off value of >4 mm. Endometrial cancer risk factors of the cases such as, unopposed estrogen or tamoxifen use, obesity, polycystic ovary syndrome or genetic predisposition were also recorded.

Diagnostic hysteroscopy was performed by vaginoscopic approach under sedation in all patients. Any intracavitary lesion realized during hysteroscopy was removed during the same session. Intraoperative (macroscopic evaluation by the surgeon) and postoperative (histopathological evaluation by the pathologist) findings were recorded and compared between the groups.

## RESULTS

Sixty five postmenopausal women with a mean age of  $57.9 \pm 7.91$  who were referred for diagnostic hysteroscopy, either for postmenopausal bleeding or an incidentally realized thick endometrium were included in the analysis. In Group A, the age of the patients ranged between 51 to 76 years and endometrial thickness was between 2 and 12 mm. among When

the risk factors for endometrial cancer were questioned, 3 patients were found to have history of polycystic ovary syndrome and 7 patients were obese (BMI >30). In Group B the age of the patients ranged between 58 to 70 years and endometrial thickness was between 5 and 33 mm. As endometrial cancer risk factor, 7 patients were found to be obese (Table 1).

In Group A, intraoperative findings were, endometrial polyps in 17 patients, leiomyoma in one patient and suspicion of endometrial hyperplasia in one patient. In that patient focal inhomogeneous polypoid endometrial thickening raised the suspicion of endometrial hyperplasia. Hysteroscopy revealed whitish-gray coloration of the endometrium, areas of hemorrhage and microcalcification, atypical vascularization and surface irregularities in that one patient diagnosed with endometrioid adenocarcinoma. In Group B intraoperative findings were, endometrial polyps in 20 patients and leiomyoma in 3 patients and suspicion of endometrial hyperplasia in one patient. In that patient focal irregular papillary endometrial thickening with abnormal vascular patterns raised the suspicion of endometrial hyperplasia. Hysteroscopy revealed diffuse atypical vascular patterns, whitish thickened areas, irregular surfaces friable and susceptible to bleeding on contact with hysteroscope in that one patient diagnosed with endometrioid adenocarcinoma. In Group A, histopathological evaluation revealed benign pathologies in 28 of the patients whereas one patient (1/30, 3%) was reported to have endometrial hyperplasia without atypia and one patient (1/30, 3%) was

reported to have endometrioid adenocarcinoma. In Group B, histopathological evaluation resulted with, benign pathologies in 32 cases while one case (1/35, 3%) was reported to have endometrial hyperplasia without atypia, one case had endometrial hyperplasia with atypia (1/35, 3%) and one woman was reported to have endometrioid adenocarcinoma (1/35, 3%). Intraoperative hysteroscopic findings and postoperative histopathological findings are summarized in Table 2. Accuracy of hysteroscopic findings were 70% (21/30) in Group A and 91% (32/35) in Group B.

## DISCUSSION

Postmenopausal bleeding is an important symptom that needs to be evaluated accurately in order to exclude endometrial premalignant and malignant conditions and quite clear management strategies have been defined about this situation.<sup>3</sup> However optimal management of thick endometrium as an incidental finding in postmenopausal women might be challenging. As an incidental finding, thick endometrium seems to be as important as postmenopausal bleeding, as the results of this study shows similar outcomes in terms of premalignant lesions and endometrial cancer in this women.

The generally accepted cut off value to define thick endometrium in postmenopausal women is 4 mm with a sensitivity of 95% and specificity of 47% for malignancies.<sup>9</sup> Studies evaluating importance of sonographically defined endometrial thickness (>4 mm) in asymptomatic postmenopausal women have reported

**TABLE 1:** Demographic characteristics, TV-US findings and risk factors of the patients.

	Group A Postmenopausal Bleeding (n=30)	Group B Thick Endometrium (n=35)
Age (min-max)	51-76	58-70
Endometrial thickness (min-max)(mm)	2-12	5-33
Risk factors		
Unopposed estrogen use	0	0
Tamoxifen treatment	0	0
Obesity (BMI >30)	7	7
PCOS*	3	0
Genetic Factors <sup>#</sup>	0	0

\*Polycystic ovary syndrome.

<sup>#</sup>Genetic factors such as hereditary non-polypoid cancer of the colon (HNPCC).

**TABLE 2:** Hysteroscopy findings and histopathological diagnosis of the cases.

Findings	Group A		Group B	
	Postmenopausal Bleeding (n=30)		Thick Endometrium (n=35)	
	Intraoperative (Hysteroscopy)	Postoperative (Histopathology)	Intraoperative (Hysteroscopy)	Postoperative (Histopathology)
Benign	29 (96%)	28 (94%)	34 (97%)	32 (91%)
Normal	11 (36%)	16 (53%)	11 (31%)	10 (28%)
Polyp	17 (57%)	10 (33%)	20 (57%)	19 (54%)
Mucoid Material		2 (7%)		1 (3%)
Leiomyoma	1 (3%)		3 (9%)	2 (6%)
Hyperplasia (Without Atypia)	1 (3%)	1 (3%)	1 (3%)	1 (3%)
Hyperplasia (With Atypia)				1 (3%)
Endometrioid Adenocarcinoma		1 (3%)		1 (3%)

histopathologically confirmed malignancy rates of 1.4-7.5% in these cases.<sup>12,13</sup> In the current study also the malignancy rate was 3% which is within the previously reported range of malignancy in such cases. On the other hand, guidelines concerning the management of incidentally identified thick endometrium, suggest further evaluation only for cases who have endometrial cancer risk factors such as, unopposed oestrogen use, tamoxifen treatment, obesity, polycystic ovary syndrome (PCOS) and genetic factors such as families with hereditary non-polypoid cancer of the colon (HNPCC) which would have led to missing premalignant/malignant cases in the current study since the cases who were diagnosed to have premalignant/malignant lesions, were totally free of any of the mentioned risk factors.<sup>8,9</sup>

Hysteroscopic evaluation has been accepted as the gold standart for endometrial evaluation.<sup>10</sup> But there are some concerns about hysteroscopic evaluation, especially about the accuracy of the intraoperative evaluation. Initial visual diagnosis in hysteroscopy appears to be more accurate for benign pathologies rather than premalignant (a sensitivity of 25% and spesifity of 96.6% for endometrial hyperplasia) and malignant (a sensitivity of 71.4% and a spesifity of 98.9% for endometrial carcinoma) lesions.<sup>14</sup> This is why, visual findings in hysteroscopy need to be supported with directed biopsies in order to increase diagnostic accuracy. For this purpose, endometrial biopsy was taken from all women in this study, including cases with intraoperative endometrial findings in favor of a benign endometrium.

One weakness of our study is that we couldn't make statisytical analysis due to the small sample

size. Sample distribution in our study is not applicable for statistical analysis. Studying a group of patients diagnosed with malignant disease that is too small can result in insufficient statistical power. Because there was only one patient in both groups diagnosed with malignant disease. That is statistical analysis becomes unable to identify real differences as significant simply since there are not enough subjects to analyze. In addition a sample that is too small carries the possibility that excessive selection was performed so that final sample may not definitely be representative of the population.

To conclude, thick endometrium in postmenopausal women may not be an innocent finding even in the absence of generally accepted endometrial cancer risk factors. Hysteroscopy and hysteroscopy guided endometrial sampling are already adopted as management strategies in symptomatic postmenopausal women. Yet management strategies in asymptomatic postmenopausal women with incidentally found thickened endometrium still need to be established. Our results are in favor of performing hysteroscopy guided endometrial sampling in this asymptomatic group, either. However, small sample size is the main limitation of our study. Larger scaled studies need to be performed to determine management strategies in this group of women.

#### **Conflict of Interest**

*No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.*

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